

b1 b2 C1

1. (Twice amended) A precursor source mixture utilized for chemical vapor deposition or atomic layer deposition comprising at least one precursor compound which is dissolved, emulsified or suspended in an inert liquid, where said precursor compound is bound to a ligand selected from the group consisting of hydride, carbonyl, imido, hydrazido, phosphido, nitrosyl, nitryl, nitrate, nitrile, halide, azide, siloxy, silyl, with the proviso that the compound is not trimethyl amine alane.

b2 C1

2. (Amended) The precursor source mixture of Claim 1 wherein said inert liquid is an aliphatic hydrocarbon, aromatic hydrocarbon, alcohol, ether, aldehyde, ketone, acid, phenol, ester, alkynitrile, halogenated hydrocarbon, silylated hydrocarbon, thioether, amine, cyanate, isocyanate, thiocyanate, silicone oil, nitroalkyl, alkynitrate, or mixtures thereof.

C1 b3

22. (Amended) The precursor source mixture of Claim 21 wherein the additive is methanol, ethanol, isopropanol, neopentanol, trimethylamine, dimethylethylamine, diethylmethylamine, triethylamine, dimethylamine, diethylamine, bistrimethylsilylamine, ammonia, ethylenediamine, propylenediamine, trimethylethylene diamine, triphenylphosphine, triethylphosphine, trimethylphosphine, allyl, cyclopentadiene, benzene, ethylbenzene, toluene, cyclohexadiene, cyclooctadiene, cycloheptatriene, cyclooctatetraene, mesitylene, tetrahydrofuran, dimethylformamide, dimethylsulfoxide, butyl acetate, acetic acid, ethylhexanoic acid, methane, ethane, pyridine, or PF₃.

Please add the following new claim:

-57. The precursor source mixture of Claim 1 wherein the at least one precursor compound is $\text{Me}_2\text{AlH}(\text{NEtMe}_2)$; $(\text{EtMe}_2\text{N})\text{AlH}_3$; $(\text{Et}_3\text{N})\text{AlH}_3$; B, Al, Ga, In, As or Sb, hydride, chloride, fluoride, bromide, iodide, Cp or azide; trimethylamine, diethylmethylamine, dimethylethylamine, or triethylamine; $\text{Mo}(\text{CO})_3$; $\text{Ru}_3\text{CO}_{12}$; $\text{Fe}(\text{CO})_5$; $\text{Co}_2(\text{CO})_8$; $\text{Os}_3\text{CO}_{12}$; $\text{Cr}(\text{CO})_6$; $\text{Mn}_2(\text{CO})_{10}$; $\text{Mo}(\text{CO})_6$; $\text{Ni}(\text{CO})_4$; $\text{Re}_2(\text{CO})_{10}$; $\text{Ru}_3(\text{CO})_{12}$; $\text{W}(\text{CO})_6$; $\text{CF}_3\text{Co}(\text{CO})_4$; $(\text{CO})_4\text{Fe}[\text{P}(\text{OCH}_3)_3]$; $(\text{CO})_4\text{Fe}[\text{N}(\text{CH}_3)_3]$; $\text{CoNO}(\text{CO})_3$; $\text{OSi}(\text{CH}_3)_3$ Li, Na, K, Rb, Cs, Fr, Cu, Ag, Au, Hg, or Tl; tetra- $\text{OSi}(\text{CH}_3)_3$ Si, Ge, Sn, Pb, Ti, Zr, or Hf; tri- $\text{OSi}(\text{CH}_3)_3$, B, Al, Ga, In, P, As, or Sb; tetrakis(dimethylamino), tetrakis(diethylamino) Ti, Zr, Hf, Si, Ge, Sn, or Pb; diethylaminoarsine dichloride; bisdimethylaminoarsine chloride; tris(dimethylamino) phosphine; tris(dimethylamino) antimony; tris(dimethylamino) arsine; tris(dimethylamino) stibine; bis(dimethylamino)(trimethylethylene diamino) aluminium; $(\text{CO})_4\text{Fe}[\text{N}(\text{CH}_3)_3]$, Li, Na, or K N(SiMe₃), pentadimethylaminotantalum; diethylaminodimethyltin; hexadimethylaminotungsten; trisdimethylamino(trimethylethylenediamino)titanium; $\text{CpCu}(\text{PEt}_3)$; $\text{CpCu}(\text{triphenylphosphine})$; $\text{Pt}(\text{PF}_3)_4$; $\text{Ni}(\text{PF}_3)_4$; $\text{Cr}(\text{PF}_3)_6$; $(\text{Et}_3\text{P})_3\text{Mo}(\text{CO})_3$; $\text{Ir}(\text{PF}_3)_4$; $\text{Ti}(\text{NO}_3)_4$; $\text{Zr}(\text{NO}_3)_4$; $\text{Hf}(\text{NO}_3)_4$; $\text{Si}(\text{CH}_3)_3(\text{NO}_3)$; $\text{RuNO}(\text{NO}_3)_3$; gallium nitrate; $\text{Sn}(\text{NO}_3)_4$; $\text{Co}(\text{NO}_3)_3$; $\text{VO}(\text{NO}_3)_3$; $\text{CrO}_2(\text{NO}_3)_2$; TiCl_4 ; ZnCl_2 ; ZrCl_4 ; HfCl_4 ; AlCl_3 ; SiCl_4 ; GaCl_3 ; SnCl_4 ; CoCl_3 ; N(SiMe₃) Li, Na, or K; $\text{B}(\text{CH}_2\text{SiMe}_3)_3$; $\{(\text{Me}_3\text{Si})_2\text{N}\}_3$ B, Al, Ga or In; $(\text{Me}_3\text{SiCH}_2)_4$ Ti, Zr or Hf; or $\{(\text{Me}_3\text{Si})_2\text{N}\}_2$ Zn, Cd or Hg--